



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/820,296	04/08/2004	Michael N. Perugini	02021-072003	7445

26161 7590 03/08/2005

FISH & RICHARDSON PC
225 FRANKLIN ST
BOSTON, MA 02110

EXAMINER

ZARROLI, MICHAEL C

ART UNIT	PAPER NUMBER
----------	--------------

2839

DATE MAILED: 03/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/820,296

Applicant(s)

PERUGINI ET AL.

Examiner

Michael C. Zarroli

Art Unit

2839

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 59,60,62-85,87 and 89-99 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 90-99 is/are allowed.
- 6) ☒ Claim(s) 59,64-69,71-74,76-81,84,85,87 and 89 is/are rejected.
- 7) ☒ Claim(s) 60,62,63,70,75,82 and 83 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>1/31/05</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Double Patenting

1. The double patenting objection and rejection from the previous office action have been overcome.

Claim Objections

2. Objections from the previous office action have been overcome.
3. Claim 89 objected to because of the following informalities: There is an antecedent problem with “**the** electrical ground circuit.” Appropriate correction is required.
4. Claim 95 objected to because of the following informalities: Line 9, “second sets contacts.” Appropriate correction is required.

Response to Arguments

5. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

7. Claims 76-78 and, 84 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Amended claims 76 and 84 have blurred the line between electrical ground and chassis ground. The applicant has amended out “chassis ground” in claim 76. This claim now recites two electrical grounds. Is one of these grounds the same as the chassis ground? Is the applicant is saying that this invention has the potential to have three separate grounds? The examiner will interpret the “ground circuit separate” to be another ground separate from a “chassis ground” and “electrical ground.”

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claim 59 rejected under 35 U.S.C. 102(b) as being clearly anticipated by Cassarly et al.

Cassarly discloses an intercoupling component (title) for receiving an array of contacts (60) within a digital or analog transmission system having an electrical ground circuit and chassis ground circuit (fig. 1), the intercoupling component comprising: a substrate (C) formed of electrically insulative material (fig. 5) and having an upper surface (fig. 1), the substrate including a plurality of holes (72) disposed on its upper surface and arranged in a predetermined footprint corresponding to the array of a contacts; and a plurality of electrically conductive signal contacts (60 in fig. 2) configured to transmit a digital or analog communication signal, each signal contact disposed within a hole on the upper surface of the substrate (fig. 4) forming an array of signal contacts, wherein some or all of the electrically conductive signal contacts are surrounded by an electrically conductive member (102) configured to electrically connect to the chassis ground circuit (132), the electrically conductive member comprising a shield at least partially disposed within the substrate (112 of 102 is in substrate see figures 4 or 5).

10. Claims 66-69 and, 73-74 rejected under 35 U.S.C. 102(b) as being clearly anticipated by new art Cassarly et al.

Cassarly discloses an intercoupling component (title) for receiving an array of contacts (B) within a digital or analog transmission system having a chassis ground circuit and electrical ground circuit (fig. 2), the intercoupling component comprising: an array of electrically conductive contacts (60) disposed in a substrate (C) formed of electrically insulative material; and an electrically conductive shield (102) at least partially disposed within the substrate in the array of electrically conductive contacts (fig. 5, 112 inserted into substrate C), wherein the shield is configured to electrically connect with the chassis ground circuit (132).

Regarding claim 67 Cassarly discloses that the shield (102) surrounds a portion of the contacts with the array of contacts (fig. 1).

Regarding claims 68-69 Cassarly discloses that a frame (120) is disposed around the array of contacts (fig. 2) and configured to electrically connect with the chassis ground circuit and shield (132 makes contact with both).

Regarding claims 73-74 Cassarly discloses that the one or more contact members (112) electrically connected to the electrical ground circuit disposed within the array of contacts (fig. 1).

11. Claims 79-81 rejected under 35 U.S.C. 102(b) as being clearly anticipated by Cassarly et al.

Cassarly discloses an apparatus for use in a digital or analog transmission system having a chassis ground circuit (132), the apparatus comprising; a printed circuit board (C), and an interconnection device (A) coupled to the printed circuit board (fig. 1), the interconnection device comprising: an array of electrically conductive contacts (60) disposed in a substrate (26) formed of nonconductive material; and an electrically conductive member (102), wherein the electrically conductive member is configured to electrically connect with the chassis ground circuit (fig. 2), wherein the electrically conductive member comprises a shield at least partially disposed within the substrate (112 fits into substrate in fig. 5).

Regarding claims 80-81 Cassarly discloses that the electrically conductive member comprises a shield formed of electrically conductive material (fig. 4, 102 cross hatching). This electrically conductive member surrounds a portion of the contacts within the array of contacts (also fig. 4).

12. Claims 85 and, 89 rejected under 35 U.S.C. 102(b) as being clearly anticipated by Cassarly.

Cassarly discloses a method of manufacture for an interconnection device (A) comprising: providing a substrate (C) formed of non-conductive material and adapted to secure an array of contacts (60); and molding a frame (102) of electrically conductive material around the perimeter of the substrate (fig. 4).

Regarding claim 89 Cassarly discloses that the frame is configured to electrically connect with a ground circuit (132) other than the electrical ground circuit (112) of a digital or analog transmission system.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 65 and 71 rejected under 35 U.S.C. 103(a) as being unpatentable over Cassarly et al as applied to claims 59 and 66 respectively above, and further in view of Cohen et al.

Cassarly does not specifically disclose that the signals are differential.

Cohen discloses the transmission of differential signals (col. 4 lines 35-4).

At the time the invention was made it would have been obvious to one of ordinary skill in the art to adjust the signaling of the contacts of Cassarly to be differential as taught by Cohen. The motivation for doing so would have been to enable the detection of unbalanced signally from the chip of Cassarly.

15. Claims 64 and 72 rejected under 35 U.S.C. 103(a) as being unpatentable over Cassarly et al as applied to claims 59 and 66 respectively above, and further in view of Shuey.

Cassarly does not specifically disclose that the signals are single ended.

Shuey discloses the transmission of single ended signals (col. 3 lines 47-52).

At the time the invention was made it would have been obvious to one of ordinary skill in the art to adjust the signaling of the contacts of Cassarly to be single ended as taught by Shuey. The motivation for doing so would have been to enable the detection of "ground bounce" Shuey column 3 line 52.

16. Claim 87 rejected under 35 U.S.C. 103(a) as being unpatentable over Cassarly et al as applied to claim 85 above, and further in view of Washino et al.

Cassarly does not specifically disclose that the frame is injection molded.

Washino disclose that a frame comprises: injection molding a frame around the perimeter of a substrate (col. 5 lines 10-16).

At the time the invention was made it would have been obvious to one of ordinary skill in the art to mold the frame of Cassarly around the substrate by injection molding as taught by Washino. The motivation for this step in the manufacturing process would be to ensure a tight fit for the frame around the substrate, which would increase the stability of the device.

Allowable Subject Matter

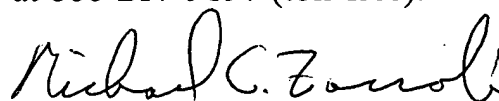
17. Claims 90-99 are allowed over the prior art of record.
18. Claims 60, 62-63, 70, 75 and, 82-83 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
19. Claims 76 and, 84 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.
20. Claims 77-78 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael C. Zarroli whose telephone number is 571-272-2101. The examiner can normally be reached on 7:30 to 3:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, T.C. Patel can be reached on (571) 272-2800 ext 39. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Michael C. Zarroli
Primary Examiner
Art Unit 2839

MCZ
MCZ